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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/554,456

02/05/2007

Wilfried Erb

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INDIANAPOLIS OFFICE 27879
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EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

06/10/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentofficeactions@brinkshofer.com

Office Action Summary	Application No. 10/554,456	Applicant(s) ERB ET AL.	
	Examiner Norca L. Torres-Velazquez	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>020507</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 02/05/2007 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Several of the references cited in the IDS are not provided with an English translation or English abstract.

Claim Rejections - 35 USC § 112

2. Claim 51 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The acronyms PTFE and PI could define several different names. Applicants are advised to write, in this case, the particular compounds they are claiming.

3. Claims 39-57 and 65-72 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what is meant by the term "half-stuff".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 39-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. (US 4,946,738) in view of HAQUE et al. (US 7,294,218 B2).

CHENOWETH et al. discloses a nonwoven fibrous product that has good strength and insulating characteristics. (Abstract) The nonwoven fibrous product comprises a blend of glass fibers and synthetic fibers. The glass fibers comprise 42% by weight of the final product. The synthetic fibers may be selected from polyesters, nylons, rayons, acrylics, vinyls, aramids and similar materials. The reference teaches that the optimum portion of synthetic fibers is approximately 38% by weight. The reference further teaches using about 4% by weight of the final product of bicomponent fibers. (Refer to Col. 3, lines 1-25; col. 4, lines 51-58; Col. 5, lines 21-22) The reference further teaches that if desired, a foraminous film or skin may be applied to one or both surfaces of the product. The density of the product may be in the range of from 1 to 50 pounds per cubic foot. $[16-800 \text{ kg/m}^3]$ (Refer to Col. 3, lines 40-44) The length of the glass fibers and the synthetic fibers is approximately one quarter to one-half inch to four inches. $[6-101 \text{ mm}]$ (col. 4, lines 62-66) The reference teaches that the glass fibers, the homogeneous synthetic fibers and the bi-component fibers are blended to produce a highly homogeneous mixture of the three fibers. The reference teaches that the blanket will have a uniform, initial thickness of between about 1 and 3 inches $[25-75 \text{ mm}]$, but that a thinner or thicker blanket may be produced if desired. (Col. 5, lines 60-67)

The Examiner equates the glass fibers to the claimed reinforcing fibers, the synthetic fibers to the claimed first fiber and the bicomponent fibers to the claimed binder.

However, CHENOWETH is silent to the basis weight of the nonwoven material.

HAQUE et al. is also directed to an insulation material. The reference teaches that the fibrous material forming the acoustical composite layer includes polymer based thermoplastic materials and reinforcement fibers such as glass fibers. (Col. 2, lines 61-65) The thermoplastic materials include polyester, polyphenylene sulfide (PPS), polysulfides, nylon, among others. The polymer fibers are from approximately 6-75 mm and may be present in an amount of from 40-80% by weight. (Col. 5, lines 58-67 through Col. 6, lines 1-12) The reference teaches the use of reinforcing fibers such as glass, natural, metal, ceramic, mineral, carbon and graphite fibers. (Col. 6, lines 23-26) The reinforcing fibers having lengths from approximately 10-100 mm. (Col. 6, lines 40-44) The reference further teaches that the thickness of the composite may be controlled by changing the basis weight of the polymer fibers and/or glass content of the composite material. (Refer to Col. 13, lines 1-15) HAQUE et al. further teaches the use of bonding agents such as acrylate polymers, polyvinyl acetate, polyvinyl alcohol, polyester resins, among others. (Refer to Col. 9, lines 62-67 through Col. 10, lines 1-6) With regards to claims 49-51, the reference further teaches that a resin in the form of a flake, granule and/or powder may be added in addition to the polymer fibers. (Col. 6, lines 19-21)

With regards to claim 45, CHENOWETH et al. discloses the claimed invention except that it teaches polyester and nylon fibers instead of the thermoplastic materials claimed, HAQUE shows these thermoplastic materials are equivalent structures known in the art. Therefore, because these thermoplastic materials were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute nylon or polyester fibers for polysulfides or polyphenylene sulfide, for example.

With regards to the basis weight of the nonwoven mat, it is noted that differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) Therefore, it would have been obvious to one having ordinary skill in the art of insulating materials to optimize the basis weight of the mat with the motivation of making the material lighter or heavier in weight according depending on the final product being made. Further, the prior art of record teaches that it would be obvious to optimize properties such as loft/density, thickness and porosity of the material.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Norca L. Torres-Velazquez/
Primary Examiner, Art Unit 1794

June 5, 2008